WHAT IS CLAIMED IS:

1. A method for determining lymphocyte diversity in a subject, said method comprising

a) providing labeled nucleic acid molecules from a population of said subject's lymphocytes, wherein each said labeled nucleic acid molecule encodes a lymphocyte receptor or a portion thereof;

b) hybridizing said labeled nucleic acid molecules or fragments of said labeled nucleic acid molecules with a population of random nucleic acid molecules; and

c) determining lymphocyte diversity of said subject by assessing hybridization of said labeled nucleic acid molecules with said population of random nucleic acid molecules.

2. The method of claim 1, wherein said random nucleic acid molecules within said population are attached to a solid substrate.

3. The method of claim 2, wherein said solid substrate is a multiwell plate or membrane, a glass slide, a chip, or a bead.

4. The method of claim 2, wherein said solid substrate is a bead.

5. The method of claim 4, wherein hybridization is assessed by flow cytometry.

6. The method of claim 2, wherein said solid substrate comprises a plurality of discrete regions, wherein each of said discrete regions comprises a different random nucleic acid molecule.

7. The method of claim 1, wherein said labeled nucleic acid molecules are labeled with a fluorochrome.

8. The method of claim 7, wherein said fluorochrome is fluorescein isothiocyanate (FITC), phycoerythrin (PE), allophycocyanin (APC), or peridinin chlorophyll protein (PerCP).

9. The method of claim 1, wherein said labeled nucleic acid molecules are labeled with biotin.

10. The method of claim 1, wherein said labeled nucleic acid molecules are labeled with an enzyme.

11. The method of claim 1, wherein said population of labeled nucleic acid molecules comprises labeled RNA molecules.

12. The method of claim 1, wherein said population of labeled nucleic acid molecules comprises labeled DNA molecules.

13. The method of claim 1, wherein said population of lymphocytes are T lymphocytes.

14. The method of claim 13, wherein said labeled nucleic acid molecules encode a variable region from a T cell receptor.

15. The method of claim 13, wherein said labeled nucleic acid molecules encode a complementarity determining region (CDR) 3 β chain polypeptide.

16. The method of claim 1, wherein said population of lymphocytes are B lymphocytes.

17. The method of claim 16, wherein said labeled nucleic acid molecules encode a variable region from a heavy chain or a light chain.

18. A method for monitoring a disease in a subject, said method comprising

a) providing labeled nucleic acid molecules from a population of said subject's lymphocytes, wherein each said labeled nucleic acid molecule encodes a lymphocyte receptor or a portion thereof;

b) hybridizing said labeled nucleic acid molecules or fragments of said labeled nucleic acid molecules with a population of random nucleic acid molecules;

c) determining lymphocyte diversity of said subject by assessing hybridization of said labeled nucleic acid molecules with said population of random nucleic acid molecules; and

d) comparing said subject's lymphocyte diversity with lymphocyte diversity of a control population, wherein an alteration in said subject's lymphocyte diversity relative to that of said control population indicates a change in said disease.

19. The method of claim 18, wherein an increase in said subject's lymphocyte diversity indicates a positive change in said disease.

20. The method of claim 18, wherein a decrease in said subject's lymphocyte diversity indicates a negative change in said disease.

21. The method of claim 18, wherein said disease is an autoimmune disorder.

22. The method of claim 21, wherein said autoimmune disorder is rheumatoid arthritis or multiple sclerosis.

23. The method of claim 21, wherein said disease is colitis.

24. The method of claim 18, wherein said disease is a lymphoid disease.

25. The method of claim 24, wherein said disease is leukemia.

26. The method of claim 24, wherein said disease is lymphoma.

27. The method of claim 18, wherein said random nucleic acid molecules within said population are attached to a solid substrate.

28. The method of claim 27, wherein said solid substrate is a multiwell plate or membrane, a glass slide, a chip, or a bead.

29. The method of claim 27, wherein said solid substrate is a bead.

30. The method of claim 29, wherein hybridization is assessed by flow cytometry.

31. The method of claim 27, wherein said solid substrate comprises a plurality of discrete regions, wherein each of said discrete regions comprises a different random nucleic acid molecule.

32. The method of claim 18, wherein said labeled nucleic acid molecules are labeled with a fluorochrome, biotin, or an enzyme.

33. The method of claim 32, wherein said fluorochrome is FITC, PE, APC, or PerCP.

34. The method of claim 18, wherein said population of labeled nucleic acid molecules comprises labeled RNA molecules.

35. The method of claim 18, wherein said population of labeled nucleic acid molecules comprises labeled DNA molecules.

36. A method for determining viral diversity in a subject, said method comprising

a) providing labeled nucleic acid molecules from a biological sample of said subject, wherein said labeled nucleic acid molecules encode a viral polypeptide;

b) hybridizing said labeled nucleic acid molecules or fragments of said labeled nucleic acid molecules with a population of random nucleic acid molecules; and

c) determining viral diversity of said subject by assessing hybridization of said labeled nucleic acid molecules with said population of random nucleic acid molecules.

37. The method of claim 36, wherein said random nucleic acid molecules within said population are attached to a solid substrate.

38. The method of claim 37, wherein said solid substrate is a multiwell plate or membrane, a glass slide, a chip, or a bead.

39. The method of claim 37, wherein said solid substrate is a bead.

40. The method of claim 39, wherein hybridization is assessed by flow cytometry.

41. The method of claim 37, wherein said solid substrate comprises a plurality of discrete regions, wherein each of said discrete regions comprises a different random nucleic acid molecule.

42. The method of claim 38, wherein said labeled nucleic acid molecules are labeled with a fluorochrome, biotin, or an enzyme.

43. The method of claim 42, wherein said fluorochrome is FITC, PE, APC, or PerCP.

44. The method of claim 36, wherein said population of labeled nucleic acid molecules comprises labeled RNA molecules.

45. The method of claim 36, wherein said population of labeled nucleic acid molecules comprises labeled DNA molecules.

46. The method of claim 36, wherein said viral polypeptide is hemaglutinin, Env, gp120, E1, or E2, or a variable portion thereof.

47. An article of manufacture comprising a) a solid substrate comprising random nucleic acid molecules immobilized thereto; and b) a primer for producing nucleic acid molecules encoding a lymphocyte receptor or a fragment thereof or a primer for producing nucleic acid molecules encoding a viral polypeptide.

48. The article of manufacture of claim 47, wherein said solid substrate is a multiwell plate or membrane, a glass slide, a chip, or a bead.

49. The article of manufacture of claim 47, wherein said solid substrate is a bead.

50. The article of manufacture of claim 47, wherein said solid substrate is a chip.